

FORM PTO-1390 REV. 2/01T		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 03438 0084
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371			U.S. APPLICATION NO (If known, see 37CFR1.5) 10/069252
INTERNATIONAL APPLICATION NO. PCT/NO00/00249	INTERNATIONAL FILING DATE July 26, 2000	PRIORITY DATE CLAIMED August 23, 1999	
TITLE OF INVENTION FISHBAIT			
APPLICANT(S) FOR DO/EO/US Anfinn SJÅSTAD and Nils Per SJÅSTAD			
Applicant(s) herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:			
1.	<input checked="" type="checkbox"/>	This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.	
2.	<input type="checkbox"/>	This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.	
3.	<input type="checkbox"/>	This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.	
4.	<input checked="" type="checkbox"/>	The US has been elected by the expiration of 19 months from the priority date (Article 31).	
5.	<input checked="" type="checkbox"/>	A copy of the International Application as filed (35 U.S.C. 371 (c)(2)).	
	a. <input checked="" type="checkbox"/>	is attached hereto (required only if not communicated by the International Bureau).	
	b. <input type="checkbox"/>	has been communicated by the International Bureau.	
	c. <input type="checkbox"/>	is not required, as the application was filed with the United States Receiving Office (RO/US).	
6.	<input type="checkbox"/>	An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)).	
	a. <input type="checkbox"/>	is attached hereto.	
	b. <input type="checkbox"/>	has been previously submitted under 35 U.S.C. 154 (d)(4).	
7.	<input checked="" type="checkbox"/>	Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3)).	
	a. <input type="checkbox"/>	are attached hereto (required only if not communicated by the International Bureau).	
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	d. <input checked="" type="checkbox"/>	have not been made and will not be made.	
8.	<input type="checkbox"/>	An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).	
9.	<input type="checkbox"/>	An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).	
10.	<input checked="" type="checkbox"/>	Annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).	
Items 11 to 20 below concern document(s) or information included:			
11.	<input type="checkbox"/>	Information Disclosure Statement under 37 CFR 1.97 and 1.98	
12.	<input type="checkbox"/>	An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.	
13.	<input type="checkbox"/>	A FIRST preliminary amendment.	
14.	<input type="checkbox"/>	A SECOND or SUBSEQUENT preliminary amendment.	
15.	<input type="checkbox"/>	A Substitute specification.	
16.	<input type="checkbox"/>	A change of power of attorney and/or address letter.	
17.	<input type="checkbox"/>	A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821-1.825.	
18.	<input type="checkbox"/>	A second copy of the published international application under 35 U.S.C. 154 (d)(4).	
19.	<input type="checkbox"/>	A second copy of the English language translation of the international application 35 U.S.C. 154 (d)(4).	
20.	<input checked="" type="checkbox"/>	Other items or information:	
	a. <input checked="" type="checkbox"/>	Copy of cover page of International Publication No. WO 01/13738	
	b. <input type="checkbox"/>	Copy of Notification of Missing Requirements.	
	c. <input type="checkbox"/>		

DATED: February 22, 2002

Fishbait

The present invention relates to the use of natural polymer, preferably starch, for bait and fish feed, the natural polymer according to the present invention being expanded and blended with an odour and/or taste additive which
5 attracts fish. The expansion of the natural polymer is carried out by the use of a suitable device before the polymer is used as bait or fish feed.

The bait normally used in fishing to-day, especially line fishing and the like, is fish which is divided into suitable pieces or alternatively other substances are employed which attract the fish by means of their smell and taste. Such
10 substances, fish and fish offal are similarly used as fish feed in fish farms. As well as being an extremely expensive form of fish feed and bait, in practice this system is encumbered with a number of drawbacks with regard to nature and the environment.

A typical disadvantage of using fish and fish offal as fish feed is linked to the
15 fact that these substances sink relatively quickly and subsequently remain lying and rotting on the bottom in fish pens. This creates unfavourable conditions in fish farms and is clearly undesirable.

A similar disadvantage occurs when using fish, fish offal and related products as bait on hooks. The bait sinks and remains lying on the bottom
20 where it is exposed to mechanical stress against the bottom, which removes the bait from the hook when it becomes caught in stones etc. on the bottom. Further drawbacks are associated with the fact that the bait decomposes after a period in the water, thereby working loose from the hook. Attempts to employ fish offal and fish remains packed in stockings or the like as bait may
25 also result in the use of stocking materials with additives which are unsafe for the fish to eat or which are harmful to the environment.

It is therefore an object of the present invention to provide a bait or fish feed which overcomes the above-mentioned drawbacks. This object is achieved substantially by employing a naturally occurring polymer in an expanded
30 state, with an added odour and/or taste-producing substance which attracts fish. In a preferred embodiment the naturally occurring polymer is a biopolymer. These are substances such as proteins and polysaccharides such as cellulose, starch and glycogen, nucleic acids and many derivatives thereof. In the preferred embodiment starch, such as maize or rice starch, is

Expanded natural polymer with an odour and/or taste-producing additive, moreover, is a reasonably priced form of bait. During fishing the principal task of bait is to attract fish to bite on the hook and there is therefore no other requirement for bait than that it should fulfil this task in the best possible manner. It is not unusual for a medium-size line fishing vessel to use bait for between NOK 100 000 and 300 000 on one trip. An expanded natural polymer with a taste and/or odour additive will be considerably cheaper. Thus it will also be possible to use larger pieces of bait on the hooks, which will be even more tempting for the fish when the pieces of bait vibrate in the current.

If the fish also eats the bait, it is safe for fish to eat natural polymers and as long as the odour and taste additive with any filler is also natural and harmless, then it is safe for people later on to eat fish which have eaten bait according to the present invention or which have been caught with bait
5 according to the present invention.

The use of natural polymers according to the present invention as fish feed in fish farming pens is advantageous since the fish feed remains high up in the pen, sinking gradually and slowly so that the fish has time to eat the feed before it sinks to the bottom. The use of expanded natural polymer with
10 added taste and/or odour which attracts the fish can also have advantages by being used as a carrier for extra additives which the fish has to eat, such as vitamins, minerals and medication such as antibiotics, etc. Thus it will be easier to administer such additives to fish in farms without them sinking rapidly to the bottom. There is therefore a greater chance of the total amount
15 of additive being consumed without it being left lying on the bottom of the pen.

Further advantages are associated with the choice of natural polymers which are broken down after a relatively short time in the water, e.g. 24-48 hours. The result of this is that expanded natural polymers used as fish feed do not
20 cause feed substances to be left lying on the bottom of the pen during the rotting process.

There are also advantages associated with the logistics of using expanded natural polymer with taste and/or odour additive as fish feed with additional additives. A moderate volume of the product can be transported to a suitable
25 location near the fish farm, where it can be expanded and minerals, vitamins, medication or the like may be added before it is used as fish feed, if these have not already been added. The degree of expansion can vary, but will essentially be over 50% relative to the starting point.

In a preferred embodiment, the natural polymer which is used according to
30 the present invention is starch, such as rice or maize starch. This may be blended with additional filler and produced as small pieces or pellets which are subsequently expanded. Odour and/or taste-producing additives may be added to the pieces or pellets before expansion, or these may be added during or after the expansion process. The expansion is carried out by heating and

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- (71) Applicant (*for all designated States except US*): SJÅSTAD INDUSTRIER AS [NO/NO]; N-6750 Stadlandet (NO).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): SJÅSTAD, Anfinn [NO/NO]; N-6750 Stadlandet (NO). SJÅSTAD, Nils, Per [NO/NO]; N-6750 Stadlandet (NO).
- (74) Agents: EILERTSEN, Hege et al.; Onsagers AS, P.O. Box 265 Sentrum, N-0103 Oslo (NO).

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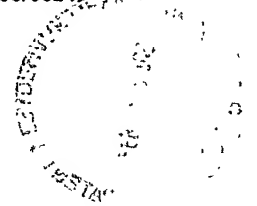
(54) Title: FISHBAIT

(57) Abstract: The present invention relates to the use of a natural polymer in bait/fish feed, the natural polymer according to the present invention being expanded and odour and/or taste added which attracts fish. The expansion is carried out by the use of a suitable device when the polymer has to be employed as bait or fish feed. In a specially preferred embodiment starch, such as maize or rice starch, is employed, possibly together with a filler.

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Annexes

Amended Sheets



PATENT CLAIMS

1. The use of natural polymer in expanded form, with added odour and/or taste additive which attracts fish, to bait or fish feed.
2. The use of natural polymer according to claim 1, where the natural polymer is a biopolymer and preferably starch.
3. The use of natural polymer according to claim 2, where the starch is preferably maize or rice starch.
4. The use of natural polymer according to claims 1-3, where the natural polymer is in the form of pieces or pellets before expansion.
- 10 5. The use of natural polymer according to claim 4, where filler is added to the natural polymer.
6. The use of natural polymer according to claims 1-5, where the odour and/or taste-producing additive which attracts fish is added to the pieces or pellets.
- 15 7. The use of natural polymer according to claims 1-5, where the odour and/or taste-producing additive which attracts fish is added during expansion.
8. The use of natural polymer according to claims 1-5, where the odour and/or taste-producing additive which attracts fish is added in expanded form.

PATENT CLAIMS

1. The use of natural polymer in expanded form, with added odour and/or taste additive which attracts fish, to bait or fish feed, where the natural polymer is a biopolymer and preferably starch.
- 5 2. The use of natural polymer according to claim 1, where the starch is preferably maize or rice starch.
3. The use of natural polymer according to claims 1-2, where the natural polymer is in the form of pieces or pellets before expansion.
4. The use of natural polymer according to claim 3, where filler is added
10 to the natural polymer.
5. The use of natural polymer according to claims 1-4, where the odour and/or taste-producing additive which attracts fish is added to the pieces or pellets.
- 6 The use of natural polymer according to claims 1-4, where the odour
15 and/or taste-producing additive which attracts fish is added during expansion.
7. The use of natural polymer according to claims 1-4, where the odour and/or taste-producing additive which attracts fish is added in expanded form.

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

FISHBAIT

and/or ☐ was filed on 26 July 2000 as United States Application Serial No. _____ the specification of which ☐ is attached or PCT International Application No. PCT/NO00/00249 and was amended on 27 November 2001 (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate or § 365(a) of any PCT international application(s) designating at least one country other than the United States, listed below and have also identified below, any foreign application(s) for patent or inventor's certificate, or any PCT International application(s) having a filing date before that of the application(s) of which priority is claimed:

Country	Application Number	Date of Filing	Priority Claimed Under 35 U.S.C.
Norway	19994057	23 August 1999	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below:

Application Number	Date of Filing

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) or § 365(c) of any PCT International application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application(s) and the national or PCT International filing date of this application:

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I hereby appoint the following attorney and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. **FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.**, Douglas B. Henderson, Reg. No. 20,291; Ford F. Farabow, Jr., Reg. No. 20,630; Arthur S. Garrett, Reg. No. 20,338; Donald R. Dunner, Reg. No. 19,073; Brian G. Brunsvold, Reg. No. 22,593; Tipton D. Jennings, IV, Reg. No. 20,645; Jerry D. Voight, Reg. No. 23,020; Laurence R. Hefter, Reg. No. 20,827; Kenneth E. Payne, Reg. No. 23,098; Herbert H. Mintz, Reg. No. 26,691; C. Larry O'Rourke, Reg. No. 26,014; Albert J. Santorelli, Reg. No. 22,610; Michael C. Elmer, Reg. No. 25,857; Richard H. Smith, Reg. No. 20,609; Stephen L. Peterson, Reg. No. 26,325; John M. Romary, Reg. No. 26,331; Bruce C. Zotter, Reg. No. 27,680; Dennis P. O'Reilly, Reg. No. 27,932; Allen M. Sokal, Reg. No. 26,695; Robert D. Bajefsky, Reg. No. 25,387; Richard L. Stroup, Reg. No. 28,478; David W. Hill, Reg. No. 28,220; Thomas L. Irving, Reg. No. 28,619; Charles E. Lipsey, Reg. No. 28,165; Thomas W. Winland, Reg. No. 27,605; Basil J. Lewris, Reg. No. 28,818; Martin I. Fuchs, Reg. No. 28,508; E. Robert Yoches, Reg. No. 30,120; Barry W. Graham, Reg. No. 29,924; Susan Haberman Griffen, Reg. No. 30,907; Richard B. Racine, Reg. No. 30,415; Thomas H. Jenkins, Reg. No. 30,857; Robert E. Converse, Jr., Reg. No. 27,432; Clair X. Mullen, Jr., Reg. No. 20,348; Christopher P. Foley, Reg. No. 31,354; John C. Paul, Reg. No. 30,413; Roger D. Taylor, Reg. No. 28,992; David M. Kelly, Reg. No. 30,953; Kenneth J. Meyers, Reg. No. 25,146; Carol P. Einaudi, Reg. No. 32,220; Walter Y. Boyd, Jr., Reg. No. 31,738; Steven M. Anzalone, Reg. No. 32,025; Jean B. Fordis, Reg. No. 32,984; Barbara C. McCurdy, Reg. No. 32,120; James K. Hammond, Reg. No. 31,964; Richard V. Burgullian, Reg. No. 31,744; J. Michael Jakes, Reg. No. 32,824; Thomas W. Banks, Reg. No. 32,719; Christopher P. Isaac, Reg. No. 32,616; Bryan C. Diner, Reg. No. 32,409; M. Paul Barker, Reg. No. 32,013; Andrew Chanho Sonu, Reg. No. 33,457; David S. Forman, Reg. No. 33,694; Vincent P. Kovalick, Reg. No. 32,867; James W. Edmondson, Reg. No. 33,871; Michael R. McGurk, Reg. No. 32,045; Joann M. Neth, Reg. No. 36,363; Gerson S. Panitch, Reg. No. 33,751; Cheri M. Taylor, Reg. No. 33,216; Charles E. Van Horn, Reg. No. 40,266; Linda A. Wadler, Reg. No. 33,218; Jeffrey A. Berkowitz, Reg. No. 36,743; Michael R. Kelly, Reg. No. 33,921; James B. Monroe, Reg. No. 33,971; Doris Johnson Hines, Reg. No. 34,629; Allen R. Jensen, Reg. No. 28,224; Lori Ann Johnson, Reg. No. 34,498; and David A. Manspeizer, Reg. No. 37,540 and _____ Please address all correspondence to **FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.**, 1300 I Street, N.W., Washington, D.C. 20005, Telephone No. (202) 408-4000.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full Name of First Inventor	<u>Anfinn SJÅSTAD</u>	Inventor's Signature	<u>[Signature]</u>	Date	<u>7/7/2002</u>
Residence	<u>Stadlandet, Norway</u>			Citizenship	<u>Norwegian</u>
Post Office Address	<u>N-6750 Stadlandet, Norway</u>				

Listing of Inventors Continued on Page 2 hereof. ☒ Yes ☐ No

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

January 2000

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